

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2003-NM-175-AD; Amendment 39-13628; AD 2004-09-37]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier Model CL-600-1A11 (CL-600), CL-600-2A12 (CL-601), and CL-600-2B16 (CL-601-3A, CL-601-3R, and CL-604) Series Airplanes**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

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**SUMMARY:** This amendment supersedes an existing airworthiness directive (AD), applicable to certain Bombardier transport category airplanes, that currently requires a detailed inspection to detect cracks of the vane brackets of the inboard flap actuator beam, and follow-on repetitive detailed inspections or corrective actions, as applicable. That AD also provides for two optional terminating actions for the detailed inspection(s). This action requires performing one or the other of the terminating actions. The actions specified by this AD are intended to detect and correct gaps between the flap vane bracket and the adjacent lower skin and between the flap vane bracket and vane actuator beam, and premature cracking of the flap vane brackets, which could result in failure of the flap vane bracket(s) when the flaps are extended and the flap vane is aerodynamically loaded, and consequent reduced controllability of the airplane. This action is intended to address the identified unsafe condition.

**DATES:** Effective June 11, 2004.

The incorporation by reference of certain publications listed in the regulations was previously approved by the Director of the Federal Register as of May 8, 2003 (68 FR 19940, April 23, 2003).

**ADDRESSES:** The service information referenced in this AD may be obtained from Bombardier, Inc., Canadair, Aerospace Group, P.O. Box 6087, Station Centre-ville, Montreal, Quebec H3C 3G9, Canada. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, suite 410, Westbury, New York; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to:

*[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).*

**FOR FURTHER INFORMATION CONTACT:** Serge Napoleon, Aerospace Engineer, Airframe and Propulsion Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, suite 410, Westbury, New York 11590; telephone (516) 228-7312; fax (516) 794-5531.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 2003-08-12, amendment 39-13125 (68 FR 19940, April 23, 2003), which is applicable to certain Bombardier transport category airplanes, was published in the Federal Register on February 13, 2004 (69 FR 7170). That action proposed to continue to require a detailed inspection to detect cracks of the vane brackets of the inboard flap actuator beam, and follow-on repetitive detailed inspections or corrective actions, as applicable. That action also proposed to require performing one or the other of two terminating actions.

## **Comments**

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were submitted in response to the proposal or the FAA's determination of the cost to the public.

## **Conclusion**

The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

## **Cost Impact**

There are approximately 411 airplanes of U.S. registry that will be affected by this AD.

The detailed inspection that is currently required by AD 2003-08-12, amendment 39-13125, takes approximately 11 work hours per airplane to accomplish, at an average labor rate of \$65 per work hour. Based on these figures, the cost impact of the currently required actions on U.S. operators is estimated to be \$293,865, or \$715 per airplane, per inspection cycle.

The terminating corrective actions specified in Part B of the Accomplishment Instructions of the applicable alert service bulletin identified in Table 2 of this AD, take approximately 24 work hours per airplane to accomplish the inspections and between 4 and 48 work hours per airplane to accomplish the replacement of the vane bracket(s), at an average labor rate of \$65 per work hour. Required parts will cost between \$535 and \$6,414 for the vane brackets. Based on these figures, the cost impact of the terminating corrective actions on U.S. operators is estimated to be between \$967,905 and \$4,559,634, or between \$2,355 and \$11,094 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the current or proposed requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

The optional terminating corrective actions specified in Part C of the Accomplishment Instructions of the applicable alert service bulletin identified in Table 2 of this AD, take approximately 80 work hours per airplane to accomplish, at an average labor rate of \$65 per work hour. Required parts will cost approximately \$6,414 for the vane brackets. Based on these figures, the cost impact of the terminating corrective actions on U.S. operators is estimated to be \$4,773,354 or between \$11,614 per airplane.

## **Regulatory Impact**

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. Section 39.13 is amended by removing amendment 39-13125 (68 FR 19940, April 23, 2003), and by adding a new airworthiness directive (AD), amendment 39-13628, to read as follows:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "www.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2004-09-37 Bombardier, Inc.:** Amendment 39-13628. Docket 2003-NM-175-AD. Supersedes AD 2003-08-12, Amendment 39-13125.

**Applicability:** This AD applies to the airplanes listed in Table 1 of this AD, certificated in any category. Table 1 is as follows:

**TABLE 1.—APPLICABILITY**

Model	Serial Nos.
CL-600-1A11 (CL-600) series airplanes	1004 through 1085 inclusive.
CL-600-2A12 (CL-601) series airplanes	3001 through 3066 inclusive.
CL-600-2B16 (CL-601-3A and CL-601-3R) series airplanes	5001 through 5194 inclusive.
CL-600-2B16 (CL-604) series airplanes	5301 through 5499 inclusive.

**Compliance:** Required as indicated, unless accomplished previously.

To detect and correct gaps between the flap vane bracket and the adjacent lower skin and between the flap vane bracket and vane actuator beam, and premature cracking of the flap vane brackets, which could result in failure of the flap vane bracket(s) when the flaps are extended and the flap vane is aerodynamically loaded, and consequent reduced controllability of the airplane; accomplish the following:

**Note 1:** Where there are differences between this AD and the applicable Bombardier alert service bulletin specified in Table 2 of this AD, the AD prevails.

## Restatement of Requirements of AD 2003-08-12

### Inspection

(a) Do a detailed inspection to detect cracks of the vane brackets of the inboard flap actuator beam, per Part A of the Accomplishment Instructions of the applicable Bombardier alert service bulletin specified in Table 2 of this AD; at the applicable time indicated in Table 3 of this AD. Table 2 is as follows:

**TABLE 2.—ALERT SERVICE BULLETINS**

Model	Bombardier alert service bulletin	Excluding
CL-600-1A11 (CL-600) series airplanes	A600-0699, Revision 01, dated July 8, 2002	Service Bulletin Incorporation Sheet, Flap Vane Bracket Inspection Program page, and Minimum Edge Distance Inspection pages.

CL-600-2A12 (CL-601) series airplanes, and CL-600-2B16 (CL-601-3A and CL-601-3R) series airplanes.	A601-0532, Revision 01, dated July 8, 2002	Service Bulletin Incorporation Sheet, Flap Vane Bracket Inspection Program page, and Minimum Edge Distance Inspection pages.
CL-600-2B16 (CL-604) series airplanes	A604-27-007, Revision 01, dated July 8, 2002.	Service Bulletin Incorporation Sheet, Flap Vane Bracket Inspection Program page, and Minimum Edge Distance Inspection pages.

Table 3 is as follows:

**TABLE 3.—COMPLIANCE TIMES**

<b>For airplanes that have accumulated—</b>	<b>The compliance time is—</b>
1,200 total landings or less as of May 8, 2003 (the effective date of AD 2003-08-12).	Before the accumulation of 1,300 total landings.
More than 1,200 total landings, but less than 3,000 total landings as of May 8, 2003 (the effective date of AD landings after 2003-08-12).	Within 100 landings after May 8, 2003 (the effective date of AD 2003-08-12).
3,000 total landings or more as of May 8, 2003 (the effective date of AD 2003-08-12).	Within 50 landings after May 8, 2003 (the effective date of AD 2003-08-12).

**Note 2:** For the purposes of this AD, a detailed inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

#### **No Crack Findings: Repetitive Inspections**

(b) If no crack is detected during the detailed inspection required by paragraph (a) of this AD, repeat that inspection thereafter at intervals not to exceed 100 landings.

#### **Crack Findings: Corrective Actions**

(c) If any crack is detected during the detailed inspection required by paragraph (a) of this AD, before further flight, do the actions specified in paragraph (e) or (f) of this AD.

#### **New Requirements of This AD**

#### **Terminating Actions**

(d) Do the actions specified in paragraph (e) or (f) of this AD, at the applicable time listed in Table 4—Compliance Time—Terminating Actions.

**TABLE 4.—COMPLIANCE TIME—TERMINATING ACTIONS**

<b>For airplanes that have accumulated—</b>	<b>The compliance time is—</b>
Less than 2,000 total landings as of the effective date of this AD	Within 600 total landings after the effective date of this AD.
2,000 or more total landings as of the effective date of this AD	Within 400 total landings after the effective date of this AD.

(e) Do the actions specified in paragraphs (e)(1), (e)(2), and (e)(3) of this AD per Part B of the Accomplishment Instructions of the applicable alert service bulletin identified in Table 2 of this AD, unless otherwise specified in this AD. Accomplishment of these actions constitutes compliance with the requirements of paragraphs (a), (b), and (c) of this AD.

(1) Do a detailed inspection to detect gaps at flap stations 60.0, 98.5, and 137.0 between the vane bracket(s) and adjacent lower skin and vane actuator beam. If any gap is in excess of the limits specified in the applicable alert service bulletin, before further flight, repair per a method approved by either the Manager, New York Aircraft Certification Office (ACO), FAA; or Transport Canada Civil Aviation (TCCA) (or its delegated agent).

(2) Measure the minimum edge distance (MED) for the fastener holes in all flap vane brackets and actuator beams. If the MED requirements for any bracket or actuator beam do not meet the allowable values specified in Figure 2 of the applicable alert service bulletin, before further flight, replace the out-of-tolerance bracket and/or actuator beam with a new bracket and/or actuator beam that meets the MED requirements specified in Figure 2 of the applicable alert service bulletin.

(3) Do a nondestructive test (NDT) inspection on all vane brackets for cracks. If any crack is found, before further flight, accomplish the corrective actions (e.g., remove gaps, ensure that the MED requirements for the replacement brackets meet the allowable values specified in Figure 2 of the applicable alert service bulletin, and replace any cracked vane bracket with a new bracket that meets the MED requirements specified in Figure 2 of the applicable alert service bulletin). Although the applicable alert service bulletin describes procedures for identifying and returning all cracked vane brackets to Bombardier, this AD does not require such actions.

(f) In lieu of the actions specified in paragraph (e) of this AD, do the actions specified in paragraphs (f)(1) and (f)(2) of this AD per Part C of the Accomplishment Instructions of the applicable alert service bulletin identified in Table 2 of this AD. Accomplishment of these actions constitutes compliance with the requirements of paragraphs (a), (b), and (c) of this AD.

(1) Replace all 12 vane brackets with new brackets that meet the MED requirements specified in Figure 2 of the applicable alert service bulletin (including removal of any gap between the vane brackets and the adjacent lower skin and actuator beams).

(2) Measure the MED for the fastener holes in all replacement flap vane brackets and actuator beams (including a detailed inspection for gaps).

(i) If the MED requirements for any bracket or actuator beam do not meet the allowable values specified in Figure 2 of the applicable alert service bulletin, before further flight, replace the out-of-tolerance bracket and/or actuator beam with a new bracket and/or actuator beam that meets the MED requirements specified in Figure 2 of the applicable alert service bulletin.

(ii) If any gap is detected, before further flight, repair the gap.

#### **Other Means of Acceptable Compliance With Paragraph (f) of This AD**

(g) Accomplishment of the inspections and modifications per Part B or Part C of the applicable alert service bulletin listed in Table 5 of this AD; and the MED dimension checks for the flap brackets and the actuator beams as specified in drawing K600-14251, including any required rework; is considered acceptable for compliance with the requirements of paragraph (f) of this AD. Table 5 of this AD is as follows:

**TABLE 5.—ACCEPTABLE BASIC ISSUE ALERT SERVICE BULLETINS**

<b>For model—</b>	<b>Use bombardier alert service bulletin—</b>
CL-600-1A11 (CL-600) series airplanes	A600-0699, Basic Issue, dated November 29, 2001.
CL-600-2A12 (CL-601) series airplanes, and CL-600-2B16 (CL-601-3A and CL-601-3R) series airplanes.	A601-0532, Basic Issue, dated November 29, 2001.
CL-600-2B16 (CL-604) series airplanes	A604-27-007, Basic Issue, dated November 29, 2001.

**Time Limits/Maintenance Checks**

(h) After doing the actions specified in paragraph (e) or (f) of this AD, revise the Airworthiness Limitation section (ALS) of the Instructions for Continued Airworthiness to state the following (this may be accomplished by inserting a copy of this AD in the ALS): "Do the applicable Time Limits/Maintenance Checks (TLMC) inspection task for the flap vane brackets at the times specified in the following table:"

**TABLE.—COMPLIANCE TIME FOR TLMCS**

<b>Condition of brackets and gaps</b>	<b>Compliance time</b>
No gap or crack in any flap vane bracket	Continue using existing TLMC bracket schedule as published in the applicable ALS.
No crack in any flap vane bracket, but shims added	For Model CL-600-1A11 (CL-600), CL-600-2A12 (CL-601), and CL-600-2B16 (CL-601-3A and CL-601-3R) series airplanes: Repeat inspections remain at 600 landings from rework. For Model CL-600-2B16 (CL-604) series airplanes: Repeat inspections remain at 1,800 landings from rework.
All 12 flap vane brackets have been replaced	For Model CL-600-1A11 (CL-600), CL-600-2A12 (CL-601), and CL-600-2B16 (CL-601-3A and CL-601-3R) series airplanes: New threshold of 7,000 landings from installation of new flap vane brackets. Repeat inspections remain at 600 landings. For Model CL-600-2B16 (CL-604) series airplanes: New threshold of 7,200 landings from installation of new flap vane brackets. Repeat inspections remains at 1,800 landings.

(i) After doing the requirements of paragraph (h) of this AD, except as provided in paragraph (j) of this AD, no alternative inspection times may be approved for these flap vane brackets.

**Alternative Methods of Compliance**

(j) In accordance with 14 CFR 39.19, the Manager, New York ACO, FAA, is authorized to approve alternative methods of compliance (AMOCs) for this AD.

**Incorporation by Reference**

(k) Unless otherwise specified in this AD, the actions shall be done in accordance with the following Bombardier alert service bulletins as listed in Table 6 of this AD, as applicable. Table 6 of this AD is as follows:

**TABLE 6.—ALERT SERVICE BULLETINS**

<b>Bombardier alert service bulletin</b>	<b>Excluding</b>
A600–0699, Revision 01, dated July 8, 2002	Service Bulletin Incorporation Sheet, Flap Vane Bracket Inspection Program page, and Minimum Edge Distance Inspection pages.
A601–0532, Revision 01, dated July 8, 2002	Service Bulletin Incorporation Sheet, Flap Vane Bracket Inspection Program page, and Minimum Edge Distance Inspection pages
A604–27–007, Revision 01, dated July 8, 2002	Service Bulletin Incorporation Sheet, Flap Vane Bracket Inspection Program page, and Minimum Edge Distance Inspection pages.

This incorporation by reference was previously approved by the Director of the Federal Register as of May 8, 2003 (68 FR 19940, April 23, 2003). Copies of the service bulletins may be obtained from Bombardier, Inc., Canadair, Aerospace Group, P.O. Box 6087, Station Centre-ville, Montreal, Quebec H3C 3G9, Canada. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, suite 410, Westbury, New York; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to:

[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

**Note 3:** The subject of this AD is addressed in Canadian airworthiness directives CF-2002-36 and CF-2002-37, both effective August 30, 2002.

#### **Effective Date**

- (1) This amendment becomes effective on June 11, 2004.

Issued in Renton, Washington, on April 28, 2004.

Kevin M. Mullin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 04-10375 Filed 5-6-04; 8:45 am]

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